

Rudimentary Horn Pregnancy

Patient Information Series – What you should know, what you should ask.

What is a rudimentary horn pregnancy?

A rudimentary horn pregnancy occurs when a fertilized egg implants and grows in a part of the uterus that is underdeveloped. This underdeveloped part of the uterus is called *the rudimentary horn of a unicornuate uterus*.

Differences in the shape and contour of the uterus occur before birth and are called *Congenital uterine anomalies*. They occur in less than 5% of all women. The unicornuate uterus is but one type of maldeveloped uterus and comprises approximately 10-20% of all uterine malformations. Rudimentary horn pregnancy is an extremely rare type of ectopic pregnancy with a reported incidence of 1 in 75,000 – 150,000 pregnancies.

How does a rudimentary horn pregnancy happen?

Uterine anomalies result from abnormal development of the embryonic structures called Mullerian ducts during fetal life. A unicornuate uterus results from an incomplete development and failure of fusion with the opposite side of a Müllerian duct.

Approximately two-thirds of women with a unicornuate uterus may also have a second smaller piece of a uterus, called a rudimentary horn. The rudimentary horns may contain lining of the uterus, called endometrium that might communicate with the contralateral uterus. 85% of rudimentary horn pregnancies occur in non-communicating rudimentary horns.

The mechanism of pregnancy occurring in the non-communicating rudimentary horn is assumed to be by migration of either the fertilized ovum or the spermatozoon from the tube on the opposite side of the pelvis, then implanting in the rudimentary horn.

What are the symptoms of a rudimentary horn pregnancy?

A rudimentary horn pregnancy doesn't always cause symptoms and may only be detected during a routine pregnancy scan. Symptoms can overlap with other ectopic pregnancies and may include a combination of the following signs:

- Amenorrhoea (absence of menstrual period) is a common symptom. However, in some cases, abnormal bleeding is mistaken as a menstrual period so you think there is no history of amenorrhoea.
- Vaginal bleeding can occur, and is often light but can be prolonged and intermittent.

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- Pain in the lower abdomen, pelvis and lower back. If you feel sharp lower abdominal pain, this is a medical emergency and you will need to contact your healthcare provider or go to the emergency room immediately.
- Some women may present with gastrointestinal symptoms (e.g. nausea and vomiting) so the suspected clinical diagnosis might be gastroenteritis rather than ectopic pregnancy.

How is a rudimentary horn pregnancy diagnosed?

Woman with a unicornuate uterus may have a history of infertility, recurrent miscarriages, or premature birth. However, most of the time, it is not detected during regular pelvic exams.

If you take a pregnancy test and the result is positive, it means that you are pregnant but it does not help to localize the position of the pregnancy: a normal intrauterine pregnancy or an ectopic pregnancy.

Rudimentary horn pregnancy is difficult to detect. Your doctor may identify an area of pain, tenderness, or a pelvic mass but can't definitively diagnose a rudimentary horn pregnancy.

Your doctor may ask you to have a blood test (called human chorionic gonadotropin or hCG) to confirm that you're pregnant. A suboptimal rise in this pregnancy hormone over a few days can suggest the diagnosis of an ectopic pregnancy but does not help to confirm the diagnosis of a rudimentary horn pregnancy. Sometimes, this blood test may also be repeated every few days until ultrasound testing can confirm or rule out an ectopic pregnancy.

A transvaginal ultrasound scan (TVS) is the tool of choice for the diagnosis of ectopic pregnancies. With this type of ultrasound, a device called a transducer is placed in your vagina. A transvaginal ultrasound allows your doctor to see the exact location of your pregnancy. In equivocal cases, three-dimensional ultrasound or magnetic resonance imaging (MRI) can help to confirm the diagnosis of a rudimentary horn pregnancy.

What are the things to watch for?

A rudimentary horn pregnancy can't proceed normally, if left untreated, the fertilized egg continues to grow, rupture and may cause life-threatening bleeding. Almost all rudimentary horn pregnancies end up with rupture before the third trimester. Symptoms of this life-threatening complication include severe abdominal or pelvic pain, fainting and shock. It is therefore important that if you experience severe pain or any other worrying symptoms that you should go to the nearest emergency department immediately.

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What are the treatment options?

To prevent life-threatening complications, the rudimentary horn pregnancy needs to be removed or ceased immediately after detection even in un-ruptured cases. Depending on your symptoms and when the rudimentary horn pregnancy is diagnosed, your doctor may recommend medical treatment with drugs, laparoscopic surgery or abdominal surgery (open surgery). In order to avoid the risk of a further rudimentary horn or tubal ectopic pregnancy, traditional surgery for a rudimentary horn pregnancy consists of the total excision of the rudimentary horn and the ipsilateral fallopian tube.

Will it happen again?

If you receive medical treatment, the recurrence of a pregnancy in rudimentary horn may occur in future though it is an extremely rare situation. If a unicornuate uterus with a rudimentary horn diagnosed during the non-pregnant state, women should be counseled regarding the potentially life-threatening complication of the functional rudimentary horn and its routine excision should be recommended.

What other questions should I ask?

- When is my next follow-up appointment?
- What are my chances of having a healthy pregnancy in the future?
- How long should I wait before trying to become pregnant again?
- Will I need to follow any special precautions if I become pregnant again?

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